REMARKS

Favorable reconsideration is respectfully requested.

The claims are 1 to 3.

The above amendment is responsive to points set forth in the Official Action.

With regard to the rejection of claim 1 in the use of the term "element polymer product", it is clear that what is intended is a polymer product including a trace element. Nevertheless, to eliminate this issue, the term "element" has been deleted from "element polymer product".

With regard to claim 3, the rejection states that the structure depicted in Figure 4 is disclosed to be a honeycomb structure but does not appear to have the structure of a normal honeycomb.

In reply, the term "honeycomb" broadly includes something resembling a honeycomb in structure or appearance. For example, a building facade having a multicellular pattern of repeated units or a weave with raised squares is included in the definition of the term "honeycomb" as set forth in Webster's Third New International Dictionary, page 1086 (1971), copy enclosed.

If the Examiner is of the opinion that the term "honeycomb like" is preferable, Applicant is agreeable to employing it.

Claims 1 to 3 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese Patent 11-123076 in view of Japanese Patents 6-207071 and 2-131578 and 5-76365.

This rejection is respectfully traversed.

A brief discussion of the present invention will be of assistance in appreciating Applicant's reasons for traversal of the rejection.

The present invention is directed to "a bacteria growth carrier including a trace element". The carrier features a polymer product obtained by including a trace element or the trace element and an inorganic nutrient salt for growth of bacteria in a synthetic or natural polymeric material. The polymeric material is sandwiched between layers of inorganic porous material.

Thus, the present invention is characterized by the fact that the inorganic porous material is on both the outer side and inner side of the polymer product and that said polymer product is not intermingled with the porous material (please refer to claim 1, "Detailed description of the invention" in page 4, "Example" on page 10, Fig. 1, etc.).

Thus, the present invention has the characteristic features that:

- a. the inorganic porous material is on both the outside and inner side of the element polymer product and
- b. the polymer product is obtained by including a trace element or the trace element and an inorganic nutrient salt for growth of bacteria.

According to these two features, the outstanding effects include that inside the carrier, a high concentration of trace element and inorganic nutrient salt required for growth of bacteria is present, the surface is made to carry out movement from the inside of the carrier by diffusion, these substances are supplied to bacteria which inhabit the surface, and when bacteria take these in, the growth is continued, and the high-density state of bacteria become maintainable. These effects have been realized for the first time by the present invention.

Such characteristic feature is disclosed or suggested by none of the cited references, alone or combined as follows:

JP 11-123076 discloses a carrier for treatment of organisms including an inorganic, organic or inorganic/organic material preferably having a porous structure containing an adsorptive material and a material for promoting physiological activity in microorganisms. Said material for promoting physiological activity is not suggestive of the presently recited polymeric material sandwiched between layers of porous material.

JP 6-207071 discloses a gelling material useful as a carrier for microorganisms but again, it is not sandwiched between porous layers.

JP 2-131578 discloses a carrier for immobilization of microorganisms which comprises a sheet form product or a three dimensional structure composed of inorganic fiber as the main component. The three dimensional structure can be a honeycomb structure. The presently recited sandwich structure is nowhere disclosed or suggested.

JP 5-76365 discloses a carrier for immobilization of microorganisms in which porous ceramic granules are deposited around thermally plasticized polymer granules.

None of these materials is remotely suggestive of the presently recited polymeric material containing trace elements, sandwiched between porous layers.

For the foregoing reasons, the rejection on prior art is untenable.

No further issues remaining, allowance of this application is respectfully requested.

If the Examiner has any comments or proposals for expediting prosecution, please contact undersigned at the telephone number below.

Respectfully submitted,

THE COMMISSIONER IS AUTHORIZED TO CHARGE ANY DEFICIENCY IN THE FEES FOR THIS PAPER TO DEPOSIT ACCOUNT NO. 23-0975

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adj, usu cap [irreg. fr. Honduras + E -ean, -lan, vars. of -an (adj, suffix)]: HONDURAN
2honduranean or honduranian \"\ n -s usu cap [irreg. fr. Honduras + E -ean, -lan, vars. of -an (n. suffix)]: HONDURAN hon-du-ras \('\)\"handuras \('\)

used for sharpening 2: a tool for enlarging holes to precise tolerances and controlling finishes esp. of internal cylindrical surfaces by means of a mechanically rotated and expanded abrasive 3: a drag for dressing and smoothing a road surface (as gravel)

**None \"\" vi -eD/-ING/-s 1: to sharpen with or as if with a hone: where (learned to ~ and strop his razor correctly—G.S.Perry) (honed his antiers sharp as knives—D.C.Peatite) (the Yankee character was homed sharp right here —Bernard DeVoto) 2: to enlarge or smooth with a hone (cylinder bodies are bored and then honed to a mirror finish—Mechanical Engineering) (the walls of the vestibule are lined with honed pink stone from Mankato—Amer. Guide Series: Minn.)

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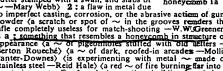
Shoney \(^\'\) adj hon.1.er \-n\overline{\text{noise}}\, -n\overline{\text{soise}}\, -n\overline{\text{soi

needed to feed other memoers of the colony honey badger n: RATEL honey badger n: RATEL honey badger n: RATEL honey balls \(\frac{\pi_n}{n}\), n pl: BUTTONBUSH honey ballm n: a sweet-scented mint (Melistis mellsssophyllum) of central and southern Europe honey bear n 1: KINKAJOU 2: SLOTH BEAR honey bear n; n; any of certain social honey-producing honey bear n; any of certain social honey-producing



honeybees: 1 queen, 2 drone, 3 worker

bees of Apis and related genera; esp: a native European bee (Apis mellifera) that is kept for its honey and wax in most parts of the world, has developed into several races differing in size, color, disposition, and productivity, and has escaped to the wild wherever suitable conditions prevail — compane BLACK BEE, CARNIOLAN BEE, DRONE, HONEYCOMB, ITALIAN BEE, QUEEN BEE, WORKER



two trees having sweetish berries: a: an Old Warld hackberry (Celtis australis) b: GENIP 2 2: a tree that bears honeyberries
honeybind also honeybine \(\frac{1}{2} = \infty \) n: WOODBINE 1
honey bird n 1: HONEY GUIDE 2: HONEY EATER
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and small insects from flowers — called also honeysucker; see BELLBIRD, FLYING COACHMAN, FRIARBIRD, STITCHBIRD, WATTLE-BIRD; Compare HONEYCREEPER hon-eyed also hon-ied \-nēd.-nid\ adj [ME honled, fr. past part: of honien to honey] : sweetened with or as if with honey (stilling the ~ air —Walter de la Mare) (many a wily roque beguiles with ~ tongue — Peggy Benneti) — hon-eyed-ly adv — hon-eyed-ness n · es honey flow \(\frac{1}{2}\) noney extractor n : extractor le honeyflow \(\frac{1}{2}\) - \(\frac{1}{2}\) no all plant of the genus \(\frac{1}{2}\) - \(\frac{1}{2}\) dial : \(\frac{1}{2}\) oneyflower \(\frac{1}{2}\) - \(\frac{1}{2}\) and \(\frac{1}{2}\) noneyflower \(\frac{1}{2}\) - \(\frac{1}{2}\) n' : any of several flowers yielding nectar copiously: as a : a plant of the genus \(\frac{1}{2}\) dianthus \(\frac{1}{2}\) : \(\frac{1}{2}\) etch \(\frac{1}{2}\) oneyflower \(\frac{1}{2}\) - \(\frac{1}{2}\) honeyflower family \(\frac{1}{2}\) : \(\frac{1}{2}\) in \(\frac{1}{2}\) etch \(\frac{1}{2}\) in \(\frac{1}{2}\) honeyflower family \(\frac{1}{2}\) in \(\frac{1}{2}\) honeyflower family \(\frac{1}{2}\) in \(\frac{1}{2}\) honeyflower family \(\frac{1}{2}\) honeyflower family \(\frac{1}{2}\) in \(\frac{1}{2}\) honeyfloy flue \(\frac{1}{2}\) \(\frac{1}{2}\) in \(\frac

CHEAT, COZEN b: to obtain by cheating or deception: FINA-GLE 2 2 chielly dial: FIATER, CAJOLE, BLANDISH ~ vi, chielly dial: to ingratiate or seek to ingratiate oneself so as to cheat or deceive honey gland n: NECTARY honey gold n: a moderate yellow that is redder and deeper than colonial yellow or mustard yellow and greener and stronger than brass.

Noney grass n 1: MOLASSES GRASS 2: MELIC GRASS honey grass n 1: MOLASSES GRASS 2: MELIC GRASS honey grass n 1: MOLASSES GRASS 2: MELIC GRASS honey grass n 1: any of several small plainly colored non-passerine birds of the family Indicatoridae esp. of the genera Indicator and Prodotiscus that inhabit Africa, the Himalayas, and the East Indies and include some that lead men or lower animals to the nests of bees — compare BARBET 2: a spot or stripe of a different color from the rest of the corolla that is found on the petals of many flowers and is assumed to act as a guide to insects in their quest of nectar honeying pres part of HONEY honey kite n: HONEY BUZZARD hon-ey-less \hat\hat\hat honey BUZZARD hon-ey-less \hat\hat\hat honey buzZARD hon-ey-less \hat\hat\hat honey buzZARD hon-ey-less \hat\hat\hat has bipinnate leaves, small greenish flowers in drooping racemes followed by long twisted pods containing seeds resembling beans and separated by a sweet edible pulp, and very hard durable reddish or reddish brown wood (2): LOCUST 3a(2) (3): CLAMMY LOCUST b: the wood of a honey locust 2 2; MESQUITE 1a; esp; any of various large arborescent tropical American mesquite wood b: the wood of such a tropical American mesquite honey mesquite n; MESQUITE 1a; esp; any of various large arborescent tropical American mesquite with strong heavy wood b: the wood of such a tropical American mesquite honey mesquite n; MESQUITE 1a; esp; any of various large arborescent tropical American mesquite with strong heavy wood b: the wood of such a tropical American mesquite honey mesquite n; MESQUITE 1a; esp; any of various large arborescent tropical American mesquite honey mesquite n; MESQUITE a

trees; shotsfring functs—called also honey agains honeymyttle \('\sigma_s, \sigma_s'\) n; an Australian tree of the genus Melaleuca
honey of rose pharmacy; a mixture of fluid extract of rose and purified honey.
honey palm n: coquitto Palm
honey plant n: any of numerous flowering plants that furnish nectar suitable for the making of honey by insects; specif; a plant of the genus Hoya
honeypod \('\sigma_s, \text{P}\) n 1: MESQUITE la 2: a pod of a mesquite honey possum or honey mouse n: a small chestnut-brown long-muzzled phalanger (Tarsipes spencerae) of southwestern Australia that feeds upon nectar and small insects noneypot \('\sigma_s, \text{P}\) n [ME hony pot, fr. hony honey + pot] 1: a receptacle for honey: a: one of the isolated waxen vessels constructed by some wild bees b: a glass or crockery container for table use (carly blown \sigma_s or impots have high lids, deep rims, and solid finials \(-\text{CW}\). Drepperdy 2 honeypots \(p\); a game in which a child (called the honeypot) with his hands clasped under his hams is swung backward and forward by his arms until his grip relaxes in order to find his weight which is reckoned at a pound for each swing 3: a flower head of a southern African shrub (Protea cynaroides) which when open is shaped like a pot and consists of an involucre of showy bracts surrounding a head of small flowers